

DEC 14 2006

Application No. 10/609,496  
Amendment dated December 14, 2006  
Reply to Office Action of September 14, 2006

Docket No.: 0941-0785P

**REMARKS**

Claims 1-20 remain present in the application.

The specification and claims 9 and 16 have been amended. Reconsideration of the application, as amended, is respectfully requested.

**Objection to the Claims**

Claims 9-20 stand objected to for certain informalities. In view of the foregoing amendments, it is respectfully submitted that these informalities have been addressed. Reconsideration and withdrawal of any objection to the claims are respectfully requested.

**Rejection under 35 USC 103**

Claims 9 and 15 stand rejected under 35 USC 103 as being unpatentable over Moon, U.S. Patent 5,896,405, in view of Thomas et al., U.S. Publication No. 2002/0051498. This rejection is respectfully traversed.

Claims 10 and 12 stand rejected under 35 USC 103 as being unpatentable over Moon in view of Thomas et al., and further in view of Chennakeshu et al., U.S. Patent 7,099,410. This rejection is respectfully traversed.

Claim 14 stands rejected under 35 USC 103 as being unpatentable over Moon in view of Thomas et al., and further in view of Robinson, U.S. Publication 002/0186797. This rejection is respectfully traversed.

Application No. 10/609,496  
Amendment dated December 14, 2006  
Reply to Office Action of September 14, 2006

Docket No.: 0941-0785P

The Examiner acknowledges that Moon et al. fails to teach or suggest a metric generator, and instead asserts that it would have been obvious to one of ordinary skill in the art to combine the metric generator of Thomas with the Viterbi decoder of Moon et al.

It is noted that independent claim 9 of the present application sets forth "a metric generator coupled to the dynamic quantizer to receive the complex signal, for partitioning the constellation into a one group and a zero group for each bit location, generating a bit metric of zero with respect to the zero group of the constellation for each received bit from the received complex signal and a channel-state information value associated with the received complex signal, and generating a bit metric of one with respect to the one group of the constellation for each received bit from the received complex signal and the channel-state information value associated with the received complex signal".

Accordingly, as set forth in claim 9, the bit metric are generated from 1) partitioning the constellation into 2 groups based upon the location of each bit, and 2) the received complex signal and a channel-state information value associated to the complex signal.

With regard to the metric generator of claim 9, the bit metric of Thomas are calculated by a previously stored value stored in the bit metric table 300 and then modified by a corresponding bit weight value (see paragraph [0108], paragraph [0109] and Fig. 14). Therefore, Thomas does not teach or suggest "partitioning a constellation into two groups based upon the location of each bit" and "generating bit metrics with respect to each group according to the complex value and a channel state information values." Although Thomas discloses that the outputs of the bit metric table 300 split into two blocks, the output data are separated according to its probability of being

Application No. 10/609,496  
Amendment dated December 14, 2006  
Reply to Office Action of September 14, 2006

Docket No.: 0941-0785P

"1" or "0", nor are not separated according to a constellation, as is set forth in claim 9 of the present application.

In view of the foregoing amendments and remarks, it is respectfully submitted that the prior art utilized by the Examiner fails to teach or suggest the OFDM receiver of independent claim 9 and its dependent claims. Reconsideration and withdrawal of the 35 USC 103 rejections are respectfully requested.

Allowable Subject Matter

Applicants gratefully acknowledge that the Examiner considers claims 1-8 to be allowable and claims 12 and 13 to contain allowable subject matter. It is noted that, although the Examiner has not specifically indicated that claims 16-20 contain allowable subject matter, the Examiner has not rejected these claims in view of the prior art of record. Accordingly, it is also believed that claims 16-20 contain allowable subject matter.

However, in view of the foregoing amendments and remarks, it is respectfully submitted that all claims should be in condition for allowance.

Conclusion

Favorable reconsideration and an early Notice of Allowance are earnestly solicited.

In the event that any outstanding matters remain in this application, the Examiner is invited to contact the undersigned at (703) 205-8000 in the Washington, D.C. area.

Application No. 10/609,496  
Amendment dated December 14, 2006  
Reply to Office Action of September 14, 2006

Docket No.: 0941-0785P

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: December 14, 2006

Respectfully submitted,

By   
Joe McKinney Muncy  
Registration No.: 32,834  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant